MONTHLY AIR QUALITY REPORT FOR NOVEMBER 2013

AQI COLOR SCALE

GOOD	MODERATE	UNHEALTHY FOR SENSITIVE GROUPS	UNHEALTHY
0-50	51-100	101-150	151-200

VERY UNHEALTHY	HAZARDOUS
201-300	301-500

Calendar of maximum AQI values & their corresponding color for November 2013*

*Preliminary data

SAMPLE POLLUTANT REPORTING BOX

1 (day of month)	O3	CO
	PM10	PM2.5

SUN	MON	TUES	WED	THU	FRI	SAT
					1 39 16 62 51	2 43 19 54 41
3 43 15 44 43	4 37 19 56 36	5 42 11 27 26	6 41 14 37 26	7 42 20 52 43	8 38 19 56 45	9 43 23 52 54
10 42 21 58 65	11 39 20 62 63	12 39 18 66 46	13 36 08 63 22	14 42 15 61 40	15 40 16 78 46	16 37 07 44 41
17 36 08 36 43	18 36 11 51 37	19 35 13 56 41	20 42 09 51 42	21 34 13 59 54	22 35 06 06 17	23 29 03 06 15
24 30 06 07 25	25 31 14 29 41	26 36 17 30 42	27 38 06 22 22	28 37 19 27 56	29 38 20 44 99	30 37 16 38 79

Calendar of High Pollution Advisories and Health Watches issued during November 2013

SUN	MON	TUE	WED	THU	FRI	SAT
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15 **A**	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

LEGEND

HIGH POLLUTION ADVISORIES
A = PM-10 High Pollution Advisory
B = PM-2.5 High Pollution Advisory
C = Ozone High Pollution Advisory

HEALTH WATCHES
D = PM-10 Health Watch
E = PM-2.5 Health Watch
F = Ozone Health Watch

Calendar of Meteorological Conditions observed in Metro Phoenix during November 2013

SUN	MON	TUE	WED	THU	FRI	SAT
					1	2 **B**
3	4 **A** **B** **D**	5	6	7	8 **E**	9 **E**
10	11 **E**	12	13	14	15 **A** **D**	16
17	18	19	20 **B** **E**	21 **A** **B** **E** **C**	22 **B** **C**	23 **B** **C**
24 **B**	25	26 **E**	27	28 **E** **F**	29 **F**	30 **F**

LEGEND

ELECTROMETEORS
A = Thunderstorm

HYDROMETEORS
B = Rain/Drizzle/Hail
C = Fog

LITHOMETEORS
D = Blowing Dust
E = Haze (vsby <10SM
F = Smoke

Exceedance days during NOV 2013-

Total=	0	Date	Max AQI	Pollutant	Site/s

Health Watches issued during NOV 2013-

Total=	0	Date	Max AQI	Pollutant	Site/s

High Pollution Advisories issued during NOV 2013-

Total=	1	Date	Max AQI	Pollutant	Site/s
		11/15	78	PM-10	Buckeye

Concentration Recap:

Days in the **Good** category:	10
Days in the **Moderate** category:	20
Days in the **Unhealthy for Sensitive Groups** category:	0
Days in the **Unhealthy** category:	0
Days in the **Very Unhealthy** category:	0
Days in the **Hazardous** category:	0
Total Forecast Days:	30

Narrative: Thanks in large part to an active mid-latitude storm track that brought several rainfall-producing upper level trough and surface frontal passages to the state of Arizona in general – and to the Phoenix metro area in particular – local air quality during the month of November 2013 was in general very good. However, the approach of a particularly potent weather disturbance prompted the issuance of a PM-10 (coarse particle) High Pollution Advisory for the 15th due to the possibility for large volumes of blowing and/or transported dust. As it turned out, despite wind gusts of up to 32 mph and visibilities as low as six miles in dust, peak PM-10 concentrations correlated to readings only in the mid-moderate range of the Air Quality Index on that date. This was followed by an extremely moisture-laden system centered at a relatively low latitude that dropped heavy precipitation over much of Arizona between the 21st and 24th – including over two inches of rain in some parts of the Valley. This effectively put an end to local PM-10 pollution for the remainder of the month. However, late in the month the seasonal PM-2.5 (fine particle) pollution problem made an early appearance when 24-hour average concentrations nearly exceeded the health standard at the Durango Monitoring site on the 29th followed by elevated readings on the 30th. This situation was due to the combination of stagnation of the air mass – characterized by overnight inversion formation, warming aloft, mostly light or calm winds, shallow mixing depths, and unfavorable dispersion – and smoke that became trapped near the ground after being emitted from wood burning activities that were mostly recreational in nature. This problem has become especially acute during the Christmas and New Year's holidays since 2005 and has resulted in numerous exceedances of the PM-2.5 health standard since then. (See the archived December and January ADEQ air quality reports issued during that timeframe for more detailed information). At any rate, during the latter part of November 2013 the visibility over the Phoenix metro area was obviously degraded due to smoke that could be discerned on images captured by the local VISNET camera array.

Please note that this is the current author's final monthly ADEQ air quality report. It is hoped that these reports – that have been produced since 2004 – have been of benefit to readers and residents of the Valley. -Reith